REMARKS

Applicants thank Examiners Fredman and Calamita for granting applicant Robert Lucito and their representatives Z. Ying Li (undersigned attorney) and Javor Stolarov a personal interview on February 8, 2005. Applicants also thank Examiners Fredman and Calamita for their patience and assistance during the interview, where all claim objections and rejections were discussed.

In view of discussions during the interview, applicants have amended claims 9 and 10 to more particularly define the scope of the invention. Specifically, the two claims have been amended to state that the source DNA for the claimed compound representation is genomic DNA, and that the claimed compound representation contains a plurality of DNA fragments. The recited "first representation" is now described as being made by digestion of the source genomic DNA with the first restriction enzyme, followed by ligation to adaptors and amplification with primers that are complementary to the adaptors. Claims 40-43 are amended accordingly to recite "said genomic DNA."

Support for the above amendments appears throughout the specification, at, e.g., page 7, lines 11-18. These amendments were discussed during the February 8, 2005 interview, and Examiners Fredman and Calamita agreed that they would help better define the invention.

Restriction Requirement

Applicants hereby affirm their election of Group I, i.e., claims 9, 10 and 40-43, for initial examination. Claims 15, 16, 39, and 44-54 have been withdrawn.

Claim Objections

Claims 40-43 stand objected to under 37 C.F.R. § 1.75(c) as being in improperly dependent form because they do not further limit the base claims.

Applicants respectfully traverse. Claims 40-43 further define the source of the genomic DNA recited in their respective base claim. As applicants pointed out during the interview, the quality and integrity of the genomic DNA may differ, depending on factors such as the age of the sample and the process by which the sample was obtained.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 9-10 and 40-43 stand rejected for lack of written description. Specifically, the Examiner states that the claims encompass a genus of nucleic acids for which no species, or common elements or attributes of the species, are disclosed.

Applicants respectfully traverse. The instant claims are directed to a collection of representational genomic DNA fragments obtainable by digestion of restriction enzymes and subsequent amplification. These DNA fragments share the commonality that they are derived from the same source genomic DNA and are excised from that source genomic DNA by the first restriction enzyme. They all contain (for claim 10) or do not contain (for claim 9) a predetermined second restriction enzyme site. Thus, "common elements or attributes" of the species of the claimed compound representations are disclosed.

During the February 8, 2005 interview, Examiner Fredman acknowledged that the instant rejection should be withdrawn because of the generic nature of the claimed representational DNA fragments.[1] The written description for the claimed collection of representational DNA fragments is satisfied by the disclosure of the common elements and attributes discussed above.

Rejection Under 35 U.S.C. § 102(b)

Claims 9, 10, and 40-43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Jones (U.S. Patent 5,858,671). The Examiner contends that Jones teaches both the compound representations of claims 9 and 10, pointing specifically to col. 4, lines 34-53 and col. 5, lines 15-34 of that document.

Applicants respectfully point out that Jones is not a proper 102(b) reference. Jones issued on January 12, 1999. This application is a divisional application of U.S. Application 09/561,881, filed May 1, 2000, which claims priority from PCT/US98/23168 (WO 99/23256), filed October 30, 1998, which claims priority from U.S. provisional application 60/064,358, filed October 30, 1997. The subject matter of the present claims is fully supported by the 1997 and 1998 priority applications. See, e.g., claims 9 and 10 of WO 99/23256. Thus, Jones issued after the two earliest priority dates of this application.

For completeness of record, applicants further point out that Jones does not teach or suggest the claimed compound representations. Jones refers to methods of sequencing a given nucleotide sequence. The steps described in the portions of text that the Examiner points to produce a collection of DNA sequences with staggered, progressively shorter lengths, save for the different adaptors attached at the end of those sequences. These DNA sequences overlap with each other, and are derived from the same target sequence that is to be sequenced. See, e.g., col. 4, lines 40-43, col. 5, lines 24-26, and Fig. 1.[2] In contrast, applicants' representational genomic DNA fragments come from different regions of the genome and are largely different in sequence.

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[1] Indeed, for the purpose of this invention, knowledge of the nucleotide sequence of the individual representational DNA fragment is not critical until that representational fragment becomes of interest, e.g., by hybridizing to a probe of interest. That representational DNA sequence can then be sequenced.

In any event, the Jones 102(b) rejection is improper and should be withdrawn.

CONCLUSION

Applicants submit that the claims as amended are in condition for allowance, and early, favorable action is solicited. The Examiner is invited to telephone the undersigned to address any remaining issue in this application.

Respectfully submitted,

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[2] Applicants also note that the second restriction site in Jone's DNA sequences is added to the DNA sequences by the adaptors, on which the second restriction site reside. *Id.* In contrast, the second restriction site in applicants' representational genomic DNA fragments are located in the genomic DNA fragments themselves, not in the adaptors.